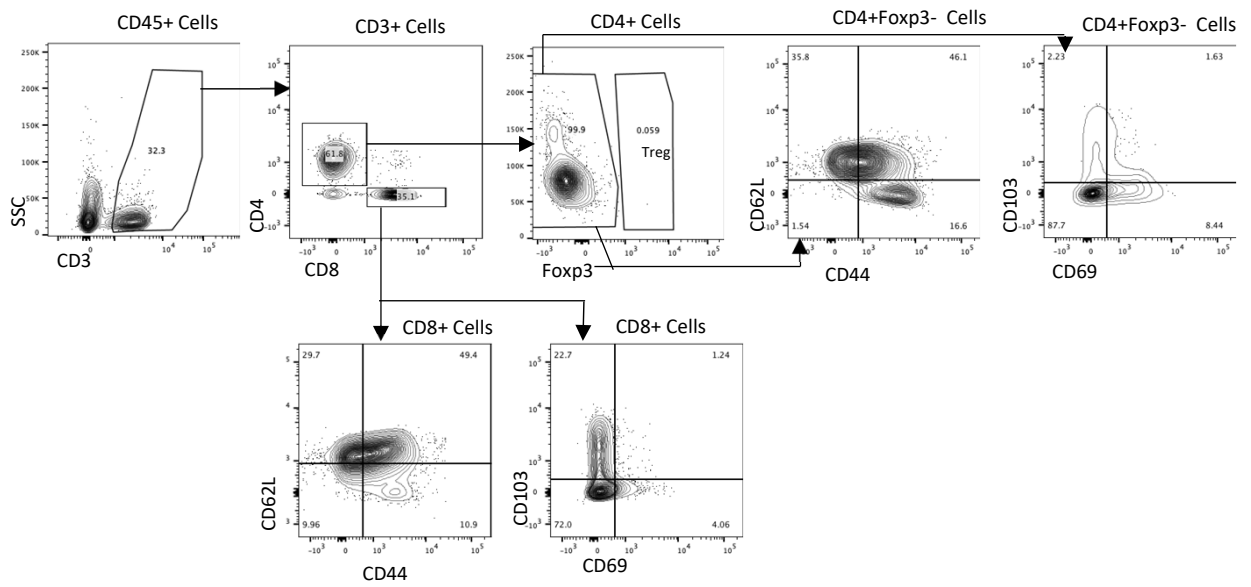
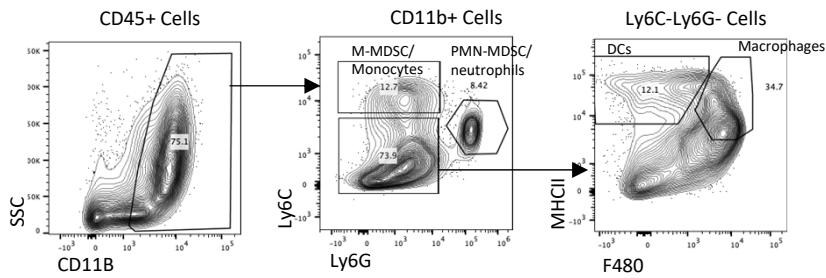


Gating Strategy: T Cells



Gating Strategy: Myeloid cells



Supplementary Table 1

Flow Cytometry Antibodies (mouse)	Fluorochrome	Company	Catalog number	Clone	Dilution
DAPI		Invitrogen	D21490		0.1ug/mL
CD11b	APC-cy7	Biologend	101226	M1/70	1:100
Ly6C	FITC	Biologend	128006	HK1.4	1:200
Ly6G	PE	Biologend	127607	1A8	1:100
CD71	APC	Ebioscience	17-0711-82	R17217	0.125ug/test
CD45	Alexa fluor 700	Biologend	103128	30-F11	1:200
TIM3	FITC	invitrogen	11-5870-82	RMT3-23	0.5ug/test
LAG3	Percp-Cy5.5	Biologend	125212	C9B7W	1:50
Ki67	FITC	Biologend	652410	16A8	1:100
CD62L	APC-Cy7	Biologend	104428	MEL-14	1:100
CD69	BV650	Biologend	104541	H1.2F3	1:50
CD11a	BV605	BD	740340	2D7	1:100
CD3	BV711	Biologend	100241	17A2	1:100
CD44	BV785	Biologend	103059	IM7	1:50
CD103	PE 594	Biologend	121430	2E7	1:50
Granzyme B	PE	Biologend	372208	QA16A02	1:20
PD1	PE Cy7	eBioscience	25-9985-82	J43	1:100
CD4	BUV395	BD	563790	GK1.5	1:100
CD8	BUV805	BD	612898	53-6.7	1:100
Nkp46	PE Cy7	Biologend	137618	29A1.4	1:100
Ki-67	APC	Biologend	652406	16A8	1:100
Foxp3	APC	Invitrogen	17-5773-82	FJK-16s	1:50
Foxp3	BV421	Biologend	126419	MF-14	1:50
Flow Cytometry Antibodies (human)	Fluorochrome	Company	Catalog number		
Zombie Aqua™ Fixable Viability		Biologend	423101		1:500
CD14	APC/Cyanine7	Biologend	367108	63D3	1:50
CD66b	FITC	BD bioscience	555724	G10F5	1:20

IF Antibody	Company	Catalog number	Concentration
Ly-6G (1A8)	StemCell Technologies	60031	1:200
CD3 (M-20)	Santa Cruz	SC-1127	1:200
Alexa 488 anti-Goat (secondary for CD3)	Invitrogen	A11055	1:200
Alexa 594 anti-RAT (secondary for Ly6G)	Invitrogen	A21209	1:200

Immune Cell Population	Flow Gating Strategy
PMN (mouse)	CD11b+Ly6C ^{low} Ly6G+CD14-
PMN (human)	CD11b+CD14 ⁻ CD15 ⁺ /CD66b ⁺ ; low-density cells
PMN-MDSC	CD11b+Ly6C ^{low} Ly6G+CD14+
M-MDSC	CD11b+Ly6C ^{hi} Ly6G ⁻
T cells (Naive)	CD3+CD62L+CD44-
T cells (Effector)	CD3+CD62L-CD44+
T cells (Memory)	CD3+CD62L+CD44+
Tregs	CD3+CD4+Foxp3+
Macrophage	CD11b+Ly6C ^{low} Ly6G-F480+

Supplementary Table 2

Reagents	Source	Identifier	Mechanism of action
Imidazole Ketone Erastin	Cayman	27088	Ferroptosis inducer
Ketorolac (tromethamine salt)	Cayman	70690	non-selective COX inhibitor
Liproxstatin-1	Cayman	17730	Ferroptosis inhibitor
ONO-AE3-208	Cayman	14522	Antagonist of the EP4 receptor
PF-04418948	Cayman	15016	Antagonist of the EP2 receptor
Rofecoxib	Cayman	10010260	COX-2 selective inhibitor
RSL3	Selleck Chem	S8155	Ferroptosis inducer
InVivoMAb anti-mouse PD-1, clone RMP1-14	Bio X Cell	BE0146	PD1 antibody
Staurosporine	SelleckChemical	S1421	Apoptosis Inducer
4-Aminobenzoic Acid Hydrazide (4-ABAH)	Cayman	14845	Myeloperoxidase inhibitor
Z-VAD-FMK	Cayman	14463	Pan-caspase inhibitor/apoptosis inhibitor

Supplementary Table 3

Mouse Primer Sequence	Sequence
mVDAC2	TCGGCAAAGCTGCCAGAGACAT
mVDAC2	GTCTCCAAGGTCCCCTAACTT
mNOX1	CTCCAGCCTATCTCATCCTGAG
mNOX1	AGTGGCAATCACTCCAGTAAGGC
mPHKG2	ACCCAGGCTATGGCAAGGAAGT
mPHKG2	TGCGTAGCATCAGGATTTGGCG
mSAT1	GAGGATGGCTTTGGAGAACC
mSAT1	GATACAGCAACTTGCCAATCCATG
mCHAC1	TGACCCTCCTGAAGACCGTGA
mCHAC1	AGTGTCCATAGCCACCAAGCACG
mACSL4	CCTTTGGCTCATGTGCTGGAAC
mACSL4	GCCATAAGTGTGGGTTTCAAGTAC
mCARS	TCATGGTGGAGGGTTTGACCTC
mCARS	GGACATCTGCAGCCTGCTATC
mHO-1	CACTCTGGAGATGACACCTGAG
mHO-1	GTGTTCTCTGTCAGCATCACC
Human Primer Sets	Sequence
HTBP_Fw	TTCGGAGAGTTCTGGGATTGTA
HTBP_Rw	TGGACTGTTCTTCACTCTTGGC
HGAPDH_Fw	CTTCAACAGCGACACCCACT
HGAPDH_Rw	GTGGTCCAGGGTCTTACTC
hTRFC_FW	ACTTGCCAGATGTTCTCAG
hTRFC_RV	GTATCCCTCTAGCCATTCAGTG
hPTGS2_FW	ACAGGCTTCCATTGACCAG
hPTGS2_RV	TCACCATAGAGTGCTTCCAAC
hHMOX1_FW	TCAGGCAGAGGGTGATAGAAG
hHMOX1_RV	TGGATGTTGAGCAGGAACGCAGT
hHILPDA_FW	TTAGAGTGATGGAGTCCCTAGAG
hHILPDA_RV	AGGTCTTATCACATGCTTCTGG
hSLC3A2_FW	GGCAAAATATCACCAAGGGC
hSLC3A2_RV	CCAGTAGAACCAGAATCAGACAG
hCHAC1_FW	TTGAAGATCATGAGGGCTGC
hCHAC1_RV	GCAAGTATTCAAGTTGTGGC
hNFE2L2_FW	ACATCCAGTCAGAAACCAAGTG
hNFE2L2_RV	AACGTAGCCGAAGAAACCTC
hHSPB1_FW	ATGTCAACCACTTCGCC
hHSPB1_RV	GTGAAGCACCGGGAGATG

Human Primer Sets	ThermoFisher Scientific catalog number
B-actin: Hs99999903_m1	Catalog number: 4331182
COX1:Hs00377726_m1	Catalog number: 4331182
COX2:Hs00153133_m1	Catalog number: 4331182
mPGES1:Hs00610420_m1	Catalog number: 4331182
cPGES:Hs01566252_m1	Catalog number: 4351372
mPGES2:Hs00228159_m1	Catalog number: 4331182
TFRC:Hs00951083_m1	Catalog number: 4331182
HMOX1:Hs01110250_m1	Catalog number: 4331182
HILPDA:Hs04991881_m1	Catalog number: 4351372
CHAC1:Hs03043929_m1	Catalog number: 4351372

Supplementary Table 4

PMN		polymorphonuclear leukocytes or granulocytes or neutrophils – neutrophils in tumor free mice and CD14- neutrophils in tumor bearing mice			
MON		monocytes			
MDSC		myeloid derived suppressor cells			
PMN-MDSC		granulocytic myeloid derived suppressor cells – CD14+ PMN in tumor bearing mice and tumor microenvironment			
M-MDSC		monocytic myeloid derived suppressor cells			
BM		bone marrow			
TME		tumor microenvironment			
ICB		immune checkpoint blockade			
GPX4		glutathione peroxidase 4			
GSH		glutathione			
PUFA		polyunsaturated fatty acids			
PL-PUFA		phospholipid PUFA			
ACSL4		acyl-coenzyme A chain family member 4			
ALOX		arachidonate lipoxygenase			
NSCLC		non-small cell lung cancer			
HNC		head and neck cancer			
PEox		oxidized phosphatidylethanolamine			
AA		arachidonic acid			
IKE		imidazole ketone erastin			
PGE ₂		prostaglandin E2			
COX		cyclooxygenase			
FATP2		fatty acid transport protein 2			
TCGA		The Cancer Genome Atlas			
PAAD		pancreatic adenocarcinoma			
LUAD		Lung adenocarcinoma			